Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A method of producing a magnetic garnet single crystal film formation substrate for growing a magnetic garnet single crystal film by liquid phase epitaxial growth, comprising the steps of:

forming a base substrate composed of a garnet-based single crystal being unstable with a flux used for the liquid phase epitaxial growth;

forming a buffer layer composed of a garnet-based single crystal thin film formed at least on a crystal growing surface of said base substrate and being stable with said flux; and

forming said buffer layer on said base substrate without a positive heating of said substrate when forming said buffer layer on said base substrate.

2. (Original) A method of producing a magnetic garnet single crystal film formation substrate for growing a magnetic garnet single crystal film by liquid phase epitaxial growth, comprising the steps of:

forming a base substrate composed of a garnet-based single crystal being unstable with a flux used for the liquid phase epitaxial growth;

forming a buffer layer composed of a garnet-based single crystal thin film formed at least on a crystal growing surface of said base substrate and being stable with said flux; and

forming said buffer layer on said base substrate by controlling a temperature of said substrate to be from the room temperature to lower than 600°C when forming said buffer layer on said base substrate.

3. (Currently Amended) The method of producing a magnetic garnet single crystal film formation substrate as set forth in claim 1 ~~or 2~~, wherein after forming the buffer

layer on said base substrate, anneal processing at 600 to 900°C is performed on said buffer layer.

4. (Currently Amended) The method of producing a magnetic garnet single crystal film formation substrate as set forth in ~~any one of claims 1 to 3~~claim 1, wherein said buffer layer is formed by a thin film formation method.

5. (Original) The method of producing a magnetic garnet single crystal film formation substrate as set forth in claim 4, wherein said buffer layer is formed by the sputtering method.

6. (Original) The method of producing a magnetic garnet single crystal film formation substrate as set forth in claim 5, wherein oxygen is included by 30 volume% or less in an atmosphere gas at the time of sputtering when forming said buffer layer by the sputtering method.

7. (Currently Amended) The method of producing a magnetic garnet single crystal film formation substrate as set forth in claim 5 ~~or 6~~, wherein input power at the time of sputtering is controlled to 2 to 10 W/cm^2 when forming said buffer layer by the sputtering method.

8. (Currently Amended) The method of producing a magnetic garnet single crystal film formation substrate as set forth in ~~any one of claims 1 to 7~~claim 1, wherein a flux including a lead oxide and/or a bismuth oxide as a main component of said flux is used.

9. (Currently Amended) The production method of a magnetic garnet single crystal film formation substrate as set forth in ~~any one of claims 1 to 8~~claim 1, wherein said base substrate has an approximately same thermal expansion coefficient as that of said magnetic garnet single crystal film.

10. (Original) The production method of a magnetic garnet single crystal film formation substrate as set forth in claim 9, wherein a difference between the thermal

expansion coefficient of said base substrate and the thermal expansion coefficient of said magnetic garnet single crystal film is within a range of $\pm 2 \times 10^{-6}$/°C or less in a temperature range of 0°C to 1000°C.

11. (Currently Amended) The production method of a magnetic garnet single crystal film formation substrate as set forth in ~~any one of claims 1 to 10~~claim 1, wherein said base substrate has an approximately same lattice constant as that of said magnetic garnet single crystal film.

12. (Original) The production method of a magnetic garnet single crystal film formation substrate as set forth in claim 11, wherein a difference between the lattice constant of said base substrate and the lattice constant of said magnetic garnet single crystal film is within a range of ±0.02Å or less.

13. (Currently Amended) The production method of a magnetic garnet single crystal film formation substrate as set forth in ~~any one of claims 1 to 12~~claim 1, wherein said base substrate includes Nb or Ta.

14. (Currently Amended) The production method of a magnetic garnet single crystal film formation substrate as set forth in ~~any one of claims 1 to 13~~claim 1, wherein said buffer layer is a garnet-based single crystal thin film substantially not including Nb and Ta.

15. (Currently Amended) The production method of a magnetic garnet single crystal film formation substrate as set forth in ~~any one of claims 1 to 8~~claim 1, wherein said buffer layer is

expressed by a general formula $R_3M_5O_{12}$ (note that R is at least one of rare earth elements and M is one selected from Ga and Fe)

or

an X-substituted gadolinium gallium garnet (note that X is at least one of Ca, Mg and Zr).

16. (Currently Amended) The production method of a magnetic garnet single crystal film formation substrate as set forth in ~~any one of claims 1 to 15~~claim 1, wherein a thickness of said buffer layer is 1 to 10000 nm and a thickness of said base substrate is 0.1 to 5 mm.

17. (Currently Amended) A magnetic garnet single crystal formation substrate produced by using the production method as set forth in ~~any one of claims 1 to 16~~claim 1.

18. (Original) A method of producing a magnetic garnet single crystal film, comprising the step of growing a magnetic garnet single crystal film on said buffer layer by using the magnetic garnet single crystal film formation substrate as set forth in claim 17 by a liquid phase epitaxial growth method.

19. (Original) A method of producing an optical element, comprising the steps of forming a magnetic garnet single crystal film by using the production method of a magnetic garnet single crystal film as set forth in claim 18, and after that, removing said base substrate and buffer layer so as to form an optical element composed of a magnetic garnet single crystal film.

20. (Original) An optical element obtained by the production method of an optical element as set forth in claim 19.